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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,208	09/24/2003	Pal Francis Hansen	3658-1001	1603
466	7590	05/17/2005	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			LAM, CATHY FONG FONG	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,208

Applicant(s)

HANSEN ET AL.

Examiner

Cathy Lam

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-18 is/are rejected.
- 7) ☒ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

In view of the amendment and remarks filed on March 01, 2005, the corrected drawing has been accepted. The pending claims however are continued to be unpatentable as following:

Election/Restrictions

1. This application contains claims 19-25 are drawn to an invention nonelected with traverse in Paper filed on March 01, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Objections

2. Claims 1 and 12 are objected to because of the following informalities: applicant uses "fiber reinforced thermoplastic mat" and "fiber reinforced thermoplastic layer" interchangeably, applicant is required to be consistently throughout. In claim 12, "the first thermoplastic layer" should be -- the first fiber reinforced thermoplastic layer --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claims 4, 5, 6 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, it is vague and indefinite as to what "at least one sandwich core" is referring to? Also, it is structurally indefinite as to where "a third fiber reinforced thermoplastic layer" is located?

In claim 5, "the various layers" lacks antecedent basis. Also, it is unclear as to where "at least one plate" is located?

Claims 4 & 5 are contradicting to claim 1, since claim 1 recites there is no additional layer between the resistance element and the fiber reinforced thermoplastic mat. Clarification is required.

In claim 6, the phrase "combination of materials which are thermally conductive" is indefinite, as it is not clearly what "materials" are referring to?

In claim 8, the phrase "the finished laminate" lacks antecedent basis.

Claim Rejections - 35 USC § 103

1. Claims 1-4 and 9-18 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Rutherford (US 6263158).

It is noted by the Examiner that some claims are drafted in a product by process format. It is the product itself which must be new and unobvious. Unless some unexpected result is shown that occurs due to Applicant's specific process(es), different processing steps are not patentably distinguishing for claims to an article.

Also, claim 10 involves with intended use language, applicant is reminded that the product itself has to be distinguishable over the prior art, not the intended usage.

Rutherford discloses a heating element comprised of a resistive wire (26), two fibrous layers (114) and two polymer layers (113) (Fig. 3).

The two fibrous layers (114) are placed over the resistive wire (26) and the two polymer layers (113) are formed onto the fibrous layers (114). Heat and pressure are

applied to the heating element so that the polymeric resin (113) melts and encapsulates the fibrous layers and the resistance wire (26) (col 5 L 5-11).

The fibrous layers (114) can be glass fibrous layer (col 5 L 24-26). The polymer layer (113) can be thermoplastic resins (col 4 L 30-32). The polymer layer (113) includes a small amount of fibers (112) (col 4 L 51-56). The fibrous layers (114) is bonded to the polymer layer (113) and the resistance wire (26) through an adhesive. The resistance wire (26) has a serpentine pattern, and the wire endings are connected to a pair of terminal electrical conductors (14,16) (ie. terminals). A temperature control device (10) (ie. temperature sensor) is connected to the resistance wire (col 4 L 1-4). The heating element is formed by compression molding (col 6 L 50-63).

One can take the fibers disposed within the thermoplastic resin being the claimed fiber reinforced thermoplastic layer and that the two fibrous support layers (322 & 324) being the sandwich core or the 3rd fiber reinforced thermoplastic layer (see Fig. 4). Or vice versa, that is the two fibrous support layers (322 & 324) being the claimed fiber reinforced thermoplastic layer and the two polymeric performs (310 & 320) resemble the sandwich core and the 3rd fiber reinforced thermoplastic layer.

Since the invention is structurally unclear. In view of the prior art teaching, one skill in the art would fabricate an electrical component with the desired insulating layer because it is a matter of design scheme.

Allowable Subject Matter

2. Claims 5-8 are objected to as being dependent upon a rejected base claim, but would be allowable if incorporate into independent claim(s). Also, Claims 5-8 would

need to be rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action

3. The following is a statement of reasons for the indication of allowable subject matter: there is no teaching in the prior art directed to a heating element that comprised of a plate which is from the mould, and the plate becomes part of the finished product.

Response to Arguments

4. Applicant's arguments filed on March 01, 2005 have been fully considered but they are not persuasive. Rutherford is obvious over the present invention.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cathy Lam
Primary Examiner
Art Unit 1775

cfl
May 12, 2005